

**WHAT IS CLAIMED IS:**

1. A semiconductor manufacturing device comprising:  
a processing chamber;

5 a supply passage that supplies a processing gas to an  
inside of the processing chamber;

a transferring passage through which a wafer is put in  
and taken out of the processing chamber;

10 an exhaust passage through which the processing gas inside  
the processing chamber is exhausted; and

a sheet-like heating unit that in order to heat an inner  
wall face of at least one of the supply passage, the transferring  
passage, the processing chamber, and the exhaust passage,  
sandwiches and covers a thin plate-shaped resistive heating  
15 element by a pair of metal plates and covers the inner wall  
face from an inner side.

2. The semiconductor manufacturing device as set forth  
in Claim 1, wherein

20 the heating unit includes a heating main body to be disposed  
adjacent to the inner wall face, an attaching portion formed  
into a flange shape or to extend integrally with the heating  
main body, and a connector that is provided at the attaching  
portion to draw out a wire for conducting electricity to the  
25 resistive heating element and a wire of a temperature sensor  
that detects a temperature of the resistive heating element.

3. The semiconductor manufacturing device as set forth in Claim 2, wherein

a piping defining the exhaust passage is formed of a plurality of pipes that are formed to be attachable and detachable and joined to each other,

the plurality of pipes have sword guard-shaped flange portions that project radially outward and face each other, at connection ends, and

the attaching portion of the heating unit is sandwiched by the flange portions via a sealing member.

4. The semiconductor manufacturing device as set forth in Claim 3, further comprising a clamp mechanism for joining the flange portions of the plurality of pipes, wherein

the clamp mechanism has a plurality of clamp blocks having grooves with roughly V-shaped sections to receive the flange portions so as to press the flange portions closer to each other, a plurality of link plates that link the plurality of clamp blocks, and a fastening member that fasten the two adjacent clamp blocks.

5. The semiconductor manufacturing device as set forth in Claim 4, wherein

the plurality of link plates include a plurality of first link plates that link one side portions of the clamp blocks to each other and a plurality of second link plates that link the other side portions of the clamp blocks to each other, and

at least one link plate of the first link plates and the second link plates is formed so as to be latched on and released from the clamp block.

5           6. A heating unit of a semiconductor manufacturing device which heats an inner wall face of any of a processing chamber, a transferring passage through which a wafer is put in and taken out of the processing chamber, and an exhaust passage through which a processing gas inside the processing chamber is exhausted,  
10 comprising:  
          a thin plate-shaped resistive heating element; and  
          a pair of metal plates that are formed to sandwich and cover the resistive heating element, cover like a sheet the inner wall face from an inner side, and define the processing  
15 chamber or the passages.

          7. The heating unit of a semiconductor manufacturing device as set forth in Claim 6, wherein  
          the heating unit includes a heating main body that is  
20 disposed adjacent to the inner wall face, an attaching portion formed into a flange shape or to extend integrally with the heating main body, and a connector that is provided at the attaching portion so as to draw out a wire for conducting electricity to the resistive heating element and a wire of a  
25 temperature sensor that detects a temperature of the resistive heating element.

8. The heating unit of a semiconductor manufacturing device as set forth in Claim 7, wherein

the heating unit includes a chamber heating unit that is disposed adjacent to the inner wall face of the processing chamber, and

the chamber heating unit includes a cylindrical heating main body to be disposed adjacent to a side wall face of the processing chamber and an attaching portion provided in a flange shape at an end of the heating main body, and a disk-shaped heating main body to be disposed to face a bottom wall face of the processing chamber and an attaching portion provided to extend on a lower face of the heating main body.

9. The heating unit of a semiconductor manufacturing device as set forth in Claim 7, wherein

the heating unit includes a chamber heating unit to be disposed adjacent to an inner wall face of the processing chamber, and

the chamber heating unit includes a cylindrical heating main body having a bottom wall and an attaching portion provided in a flange shape at an opening end of the heating main body.

10. The heating unit of a semiconductor manufacturing device as set forth in Claim 7, wherein

the heating unit includes a transferring passage heating unit that is disposed adjacent to an inner wall face of the transferring passage, and

the transferring passage heating unit includes a cylindrical heating main body having a roughly rectangular section and an attaching portion provided in a flange shape on the heating main body.

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**11.** The heating unit of a semiconductor manufacturing device as set forth in Claim 7, wherein

the heating unit includes an exhaust passage heating unit to be disposed adjacent to an inner wall face of the exhaust passage, and

the exhaust passage heating unit includes a cylindrical heating main body and an attaching portion provided in a flange shape on the heating main body.

**12.** The heating unit of a semiconductor manufacturing device as set forth in Claim 7, wherein

the heating unit includes an exhaust passage heating unit to be disposed adjacent to an inner wall face of a curved exhaust passage,

the exhaust passage heating unit includes a curved cylindrical heating main body and an attaching portion provided in a flange shape on the heating main body, and

the heating main body is formed so that a heating value becomes higher in an outside region than in an inside region of the curved exhaust passage.

**13.** The heating unit of a semiconductor manufacturing

device as set forth in Claim 7, wherein

the heating unit is disposed by leaving a space for insulating heat between the heating unit and the inner wall face.

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